

REMARKS

In the Office Action of July 13, 2004, claims 5-8 were indicated as being allowable. Additionally, claims 10-15 were rejected under 35 U.S.C. §112 on the grounds that “[i]t is not the reciprocating member that affects the momentum within the boundary layer.” Claim 15 was also rejected under 35 U.S.C. §112 on grounds that claim 15 lacked antecedent support for “the liquid port.” Furthermore, claims 1-3, 16, 18, and 19 were rejected under 35 U.S.C. §102 as being anticipated by Quanonne, and claims 9, 17, and 20 were rejected under 35 U.S.C. §103 as being obvious in view of Quanonne. Finally, the drawings were objected to for failing to show a source of fluid in a gaseous state as allegedly required by claim 2. No grounds of rejection were set forth for claim 4.

Applicant has herein canceled claims 9, 11, 17, and 20, thereby rendering the rejections of such claims moot. Moreover, Applicant has amended claims 4, 5, and 18 into independent form without altering the essence of the limitations of such claims. Furthermore, independent claims 1, 10, and 16 were each amended to add limitations pertaining to a voice coil actuator. Yet further, claim 15 has been amended to correct its dependency from claim 10 to claim 14, thereby providing antecedent basis for “the liquid port” recited in claim 15. Finally, Applicant has added new claims 21-23.

Aside from being amended into independent form, claim 4 remains as originally filed and because no grounds of for rejecting claim 4 has been made, Applicant submits that claim 4 is in condition for allowance. Any rejection of claim 4 must be considered a new ground of rejecting claim 4, and one that was not necessitated by the amendments herein.

Applicant submits the ensuing remarks in support of the allowability of all other pending claims as amended and the drawings.

The Drawing Figures Comply With 37 CFR 1.83(a)

The Office Action states that the drawing figures fail to disclose a source of fluid in a gaseous state as allegedly required by claim 2. However, Applicant notes that claim 2 does not require a source of fluid in a gaseous state, but rather requires the fluid expelled from the fluid port into the liquid stream boundary layer to be in a gaseous state as it is expelled. Figure 6 shows an embodiment of the invention configured and adapted to expel the fluid port into the liquid stream boundary layer in a gaseous state. Notably, the volume of the fluid chamber 58 is shown and described as containing a gaseous fluid. The gaseous fluid may be air and it therefore follows that the gaseous fluid may be non-visible.

The Objections to Claims 5-8 Have Been Overcome

Claim 5 has herein been amended into independent form including all limitations of the originally filed claims from which it depended. Thus it follows then that claim 5, which was indicated in the Office Action as being allowable but for its dependency on a rejected claim, is now in condition for allowance. Hence, it follows that claims 6-8, being dependent on claim 5 and not otherwise depending from any rejected claims, are also in condition for allowance.

Claims 1, 2, 3, 10, 12-15, 16, 19, and 21-23 Are Neither Anticipated Nor Made Obvious

By The Prior Art

Independent claims 1, 10 and 16, as amended, now require, among other things, a voice coil actuator. The prior art fails to teach the use of an a voice coil actuator, "with specificity" as is required to establish a valid rejection of claims 1, 10, and 16 in accordance with U.S. patent laws and rules. Moreover, the inventor of the present invention has appreciated the utility of a voice coil actuator to increase the momentum of fluid in the boundary layer surrounding a watercraft in the manner claimed and any allegations that the prior art suggests such utility impermissibly relies upon hindsight gleamed by Applicant's own disclosure of the benefits thereof. For these reasons, the prior art fails to suggest or teach each and every limitation of claims 1, 10, and 16. As such, claims 1, 10, and 16 are not anticipated by nor obvious in view of the prior art and Applicant requests that the rejections thereof be withdrawn. Moreover, it follows then that claims 2, 3, 12-15, 19, and 21-23, each being dependent upon one of claims 1, 10, and 16 are also neither anticipated nor made obvious by the prior art and that the rejections thereof should also be withdrawn.

Claim 18 Is Neither Anticipated Nor Made Obvious By The Prior Art

Independent claim 18 requires, among other things, an opening that provides the sole fluid connection between the fluid passageway and the external environment. The Quanonne reference fails to disclose any such opening. Moreover, the Quanonne reference pertains to a system for pumping air into the boundary layer of water that passes along the hull of a watercraft. In order to do this, there can be no opening that

provides the sole fluid connection between the fluid passageway and the external environment . Thus, the prior art fails to disclose or suggest all the limitations of claim 18 and therefore fails to anticipate or make obvious claim 18. As such, the rejection of claim 18 under 35 USC §102 is improper and should be withdrawn.

Claims 10-15 Comply With 35 U.S.C. §112

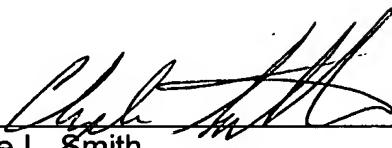
In the Office Action, it is alleged that the reciprocating member does not affect the momentum within the boundary layer as recited in Claim 10 and that Claims 10-15 are therefore indefinite under 35 U.S.C. §112. However, claim 10 requires the reciprocating member to be in fluid communication with the liquid environment that is external to the watercraft. Thus reciprocation of the reciprocating member as claimed can be used increase the momentum of the boundary layer. This is clearly explained throughout the specification. The fact that, in the preferred embodiment of the invention disclosed in the specification, the reciprocating member is not directly engaged with boundary layer is immaterial because it is nonetheless capable of affecting the momentum within the boundary layer.

CONCLUSION

In view of the above, Applicant submits that this application is now in condition for allowance and notification of such is respectfully requested.

Respectfully submitted,
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